

ers; the animal matter which they contain is chiefly gelatine and a little resin; and the fibrous vegetable matter appears to have been derived from the inner coat enveloping the farinaceous part of the oat. From other cases, which the author mentions at the conclusion of his paper, it appears that oatmeal has not unfrequently contributed to the deposition upon intestinal concretions; and from the analyses which he quotes, the same fibrous matter has been detected in them by other chemists.

On the Concentric Adjustment of a Triple Object-Glass. By William Hyde Wollaston, M.D. V.P.R.S. Read December 13, 1821. [Phil. Trans. 1822, p. 32.]

The centering of a triple achromatic object-glass has always presented considerable difficulties to practical opticians, which Dr. Wollaston has succeeded in removing, with regard to an excellent telescope in his own possession, by observing the relative position of the fifteen small images of a luminous object near the eye-glass, which are formed by the binary combinations of the reflexions of the six surfaces concerned, and which are seen by an eye situated beyond the object-glass, and assisted, if required, by a lens. When these images are all in the same right line, it is obvious that the glasses are not only well adjusted together, but that each is well centered; and by means of four screws acting on each glass, Dr. Wollaston was able to make the adjustment so complete, as considerably to improve the powers of the instrument.

On a New Species of Rhinoceros found in the interior of Africa, the Skull of which bears a close Resemblance to that found in a Fossil State in Siberia and other Countries. By Sir Everard Home, Bart. V.P.R.S. Read December 13, 1821. [Phil. Trans. 1822, p. 38.]

The animal described in this paper was shot about 300 miles west of La Goa Bay, 6 miles from the city of Mashow, and 1000 miles in a straight direction from the Cape of Good Hope. It is graminivorous, and not gregarious. The skull is 36 inches long; and the position of the horns, though differing in many respects from those of other existing species, bear so close a resemblance to those of the fossil skulls from Siberia, as to leave no prominent characteristic mark between them; hence the author doubts whether many races of animals supposed to be extinct are really so: he thinks it probable that they may have retired to uninhabited parts of the globe. The small capacity of the skull of the rhinoceros, as compared with that of the elephant, accounts for its inferior intellect, for the extreme difficulty of rendering the animal tractable, and for the failure of all attempts that have been made at taming him; and renders it not improbable that the unicorn, not to be tamed, mentioned by Job, is identical with the rhinoceros, since no other animal so devoid of intellect has ever been described. In that age, says the author, the short horn, which

cannot be regarded as a defensive weapon, might easily have been overlooked, and the smoothness of the skin would give it a greater resemblance to the horse than any other animal.

This paper is accompanied by two plates, exhibiting the skull of the African and of the fossil Siberian rhinoceros, and a fossil horn of the latter.

Extract of a Letter from Captain Basil Hall, R.N. F.R.S. to William Hyde Wollaston, M.D. V.P.R.S. containing Observations of a Comet seen at Valparaiso. Read January 10, 1822. [Phil. Trans. 1822, p. 46.]

The comet described in Captain Hall's letter was visible for 33 days in the months of April and May, 1821. During the first week its nucleus was bright and distinct; but being then in the interior of the country, he did not commence observing it till the 8th of April, when its nucleus had become so indistinct as to render its measurement by the micrometer uncertain. On its first appearance, the comet appeared of a dull white, and its tail presented a dark streak between its sides, giving it the appearance of being split. On the second evening the tail subtended an angle of 7° , reaching to ρ Ceti; on the seventh the nucleus was less bright, and the tail shorter, arising, probably, from the increased distance of the comet. The tail was at first nearly at right angles to the horizon, but each succeeding night it inclined more to the south. Tables of the observations and some sketches of the appearance of this comet accompany Captain Hall's communication.

Elements of Captain Hall's Comet. By J. Brinkley, D.D. F.R.S. and M.R.I.A. and Andrews Professor of Astronomy in the University of Dublin. In a Letter addressed to W. H. Wollaston, M.D. V.P.R.S. Read January 10, 1822. [Phil. Trans. 1822, p. 50.]

Dr. Brinkley remarks that the comet observed by Captain Hall is interesting to astronomers on account of its small perihelion distance, for there are only three, out of 116, in M. Delambre's catalogue, that pass nearer to the sun. On the 8th of April it was distant from the earth $1\cdot41$, and on the 3rd of May, $2\cdot64$, the sun's distance from the earth being unity.

Dr. Brinkley also remarks that it is probably the same comet that was observed in 1593; it agrees with that in its small perihelion distance, and great inclination. Of that comet, the inclination was 88° , and the perihelion distance $0\cdot89$; of this, the inclination is $106^{\circ}44'$, and its perihelion distance $0\cdot93$.

To the proximity of this comet to the sun, when on the north side of the ecliptic, in February and March last, before it passed its perihelion, Dr. Brinkley attributes its having escaped European observers. It was never more than a few degrees from the sun, and therefore could not have been visible. The author then points out